

WHAT IS CLAIMED IS:

1. A polyester composition, stabilized against the formation of aldehydic contaminants during melt processing of said polyester, which comprises

(a) a polyester, and

(b) an effective stabilizing amount of an additive combination, wherein the additives are selected from at least two different groups, wherein the groups are

(i.) poly(vinyl alcohol) or ethylene/vinyl alcohol copolymer,

(ii.) polyhydric alcohols and

(iii.) polyacrylamide, polymethacrylamide or an acrylamide or methacrylamide copolymer with at least one ethylenically unsubstituted comonomer.

2. A composition according to claim 1 wherein the polyester of component (a) is 95-99.9 % by weight of the stabilized composition; and the additive combination of component (b) is 5 to 0.1 % by weight of the stabilized composition.

3. A composition according to claim 1 wherein the polyester of component (a) has dicarboxylic acid repeat units selected from the group consisting of aromatic dicarboxylic acids having 8 to 14 carbon atoms, aliphatic dicarboxylic acids having 4 to 12 carbon atoms, cycloaliphatic dicarboxylic acids having 8 to 12 carbon atoms, and mixtures thereof.

4. A composition according to claim 3 wherein the dicarboxylic acid is terephthalic acid, isophthalic acid, o-phthalic acid, naphthalene dicarboxylic acid, cyclohexane dicarboxylic acid,

cyclohexanediacetic acid, diphenyl-4,4'-dicarboxylic acid, succinic acid, glutaric acid, adipic acid, sebacic acid and mixtures thereof.

5. A composition according to claim 4 wherein the dicarboxylic acid is terephthalic acid or 2,6-naphthalene dicarboxylic acid.

6. A composition according to claim 1 wherein the diol portion of the polyester of component (a) is derived from the generic formula HO-R-OH where R is an aliphatic, cycloaliphatic or aromatic moiety of 2 to 18 carbon atoms.

7. A composition according to claim 6 wherein the diol is ethylene glycol, diethylene glycol, triethylene glycol, propane-1,3-diol, butane-1,4-diol, pentane-1,5-diol, hexane-1,6-diol, 1,4-cyclohexanedimethanol, 3-methylpentane-2,4-diol, 2-methylpentane-1,4-diol, 2,2-diethylpropane-1,3-diol, 1,4-di-(hydroxyethoxy)benzene, 2,2-bis(4-hydroxycyclohexyl)-propane, 2,4-dihydroxy-1,1,3,3-tetramethylcyclobutane, 2,2-bis-(3-hydroxyethoxyphenyl)propane, 2,2-bis-(4-hydroxypropoxyphenyl)ethane and mixtures thereof.

8. A composition according to claim 7 wherein the diol is ethylene glycol.

✓ 9. A composition according to claim 1 wherein the polyester of component (a) is poly(ethylene terephthalate) PET or poly(ethylene 2,6-naphthalene-2,6-dicarboxylate).

✓ 10. A composition according to claim 9 wherein the polyester is poly(ethylene terephthalate).

11. A composition according to claim 1 wherein the additive of group (i.) is an ethylene/vinyl alcohol copolymer.

12. A composition according to claim 11 wherein the additive of group (i.) is an ethylene/vinyl alcohol copolymer where the mole ratio of ethylene to vinyl alcohol is 99:1 to 1:99.

13. A composition according to claim 12 where in the ethylene/vinyl alcohol copolymer the mole ratio of ethylene to vinyl alcohol is 50:50 to 20:80.

14. A composition according to claim 1 wherein the polyhydric alcohol of group (ii.) is starch, cellulose or a sugar or a sugar alcohol.

15. A composition according to claim 14 wherein the polyhydric alcohol is cellulose or starch.

16. A composition according to claim 1 wherein the polyhydric alcohol is selected from the group consisting of degraded starch (dextrins and cyclodextrins), maltose and its derivatives, maltitol, maltopentaose hydrate, maltoheptaose, maltotetraose, maltulose monohydrate, D,L-glucose, dextrose, sucrose and D-mannitol.

17. A composition according to claim 1 wherein the polyhydric alcohol is selected from the group consisting of trimethylol propane, triethylol propane, glycerol, sorbitol, pentaerythritol and dipentaerythritol.

18. A composition according to claim 1 wherein the additive of group (iii.) is any polymer which contains a polymerized acrylamide or methacrylamide repeating unit.

19. A composition according to claim 18 wherein the additive of group (iii.) is polyacrylamide, polymethacrylamide or a copolymer of acrylamide or methacrylamide with another ethylenically unsaturated monomer which is acrylamide, methacrylamide, styrene, ethylene, an alkyl acrylate, an alkyl methacrylate, N-vinyl-2-pyrrolidinone or acrylonitrile.

20. A composition according to claim 18 wherein the additive of group (iii.) is a copolymer of acrylamide or methacrylamide with another ethylenically unsaturated monomer which is a hydroxyalkyl methacrylate, a hydroxyalkyl acrylate or dimethylaminoethyl methacrylate.

✓ **21.** A composition according to claim 18 wherein the additive of group (iii.) is polyacrylamide.

22. A process for preventing the formation of aldehydic contaminants during melt processing of a polyester which comprises

incorporating into said polyester an effective stabilizing amount of an additive combination, wherein the additives are selected from at least two different groups, wherein the groups are

(i.) poly(vinyl alcohol) or ethylene/vinyl alcohol copolymer,

(ii.) polyhydric alcohols and

(iii.) polyacrylamide, polymethacrylamide or an acrylamide or methacrylamide copolymer with at least one ethylenically unsubstituted comonomer.

23. A mono- or multi-layered plastic container or film, stabilized against the formation of aldehydic contaminants during melt processing of said container or film, comprising at least one layer which comprises

(a) a polyester, and

(b) an effective stabilizing amount of an additive combination, wherein the additives are selected from at least two different groups, wherein the groups are

(i.) poly(vinyl alcohol) or ethylene/vinyl alcohol copolymer,

(ii.) polyhydric alcohols and

(iii.) polyacrylamide, polymethacrylamide or an acrylamide or methacrylamide copolymer with at least one ethylenically unsubstituted comonomer.

24. A plastic container according to claim **19** which is a rigid bottle.